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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JHEROEN P. DORENBOSCH, JACK ANTHONY GIPSON, LOWELL C. HUFFERD III, ALEX P. HIRSBRUNNER, ANATOLY S. BELKIN, ANAND BERNARD ALEN, and BRIAN D. STORM

Appeal 2009-000251
Application 10/649,756
Technology Center 2600

Decided: August 25, 2009

Before KENNETH W. HAIRSTON, ROBERT E. NAPPI, and THOMAS S. HAHN, *Administrative Patent Judges.*

NAPPI, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 6(b) of the rejection of claims 1 through 5, 9 through 12, 14 through 16, 18 through 29, 33, 34 and 39 through 41. Claims 17, 30, 35 through 38, and 42 are allowed, claims 6 through 8, 13, 31, and 32 have been canceled.

We affirm-in-part.

INVENTION

The invention is directed to a system and method for use with mobile subscriber devices. The system and method is used as the device moves from the coverage area of one communications system to the coverage of a second communications system. The system and method make use of an egress portal to identify when the mobile device is moving between the systems. See Figures 3 and 4 and pages 5 and 6 of Appellants' Specification. Claim 1 is reproduced below:

> 1. A method comprising:
> detecting a first signal from an egress portal, the first signal associated with indicating passage through the egress portal, wherein the egress portal resides within a cell of a wireless local area network and occupies a region that is smaller than the cell;
> initiating, in response to detecting the first signal from the egress portal, a registration sequence with a second wireless communication system; and
> conducting a present or a subsequent call via the second wireless communication system.

REFERENCES

Haverinen	US 2003/0119481 A1	Jun. 26, 2003
Sundar	US 2003/0134636 A1	Jul. 17, 2003

Chaskar	US 2004/0137902 A1	Jul. 15, 2004
Johnson	US 2005/0079864 A1	Apr. 14, 2005

REJECTIONS AT ISSUE

1) The Examiner has rejected claims 1 through 5, 9 through 12, 14, 15, 25 through 29, 33, 34, and 39 through 41 under 35 U.S.C. § 102(e) as being unpatentable over Johnson. The Examiner's rejection is on pages 4 through 11 of the Answer.[1]

2) The Examiner has rejected claim 16 under 35 U.S.C. § 103(a) as being unpatentable over Johnson in view of Haverinen. The Examiner's rejection is on pages 11 through 12 of the Answer.

3) The Examiner has rejected claims 18 through 24 under 35 U.S.C. § 103(a) as being unpatentable over Sundar in view of Chaskar. The Examiner's rejection is on pages 12 and 16 of the Answer.

Rejections under 35 U.S.C. § 102(e)

ISSUES

Claims 1 through 5, 9 through 11, 25 through 29, 33, 34, and 40.

Appellants argue on page 12 of the Brief[2] and page 4 of the Reply Brief that the Examiner's rejection of independent claims 1 and 25 under 35 U.S.C. § 102(e) is in error. Appellants argue that Johnson does not teach an egress portal as claimed.

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[1] Throughout the opinion we refer to the Answer mailed February 4, 2008.

Thus, Appellants' contentions directed to the rejection of claims 1 through 5, 9 through 11, 25 through 29, 33, 34, and 40 present us with the issue: have Appellants shown that the Examiner erred in finding that Johnson teaches an egress portal as recited in independent claims 1 and 25?

Claims 12, 14, 15 and 41.

On page 12 of the Brief and pages 4 and 5 of the Reply Brief, Appellants argue that the Examiner's rejection of independent claim 12, under 35 U.S.C. § 102(e) is in error. Appellants argue that Johnson does not teach that a registration sequence is initiated in response to a signal from an egress portal as claimed.

Thus, Appellants' contentions directed to the rejection of claims 12, 14, 15, and 41 present us with the issue: have Appellants shown that the Examiner erred in finding that Johnson teaches a registration sequence is initiated in response to a signal from an egress portal as recited in representative claim 12?

Claim 39.

On page 13 of the Brief and pages 5 and 6 of the Reply Brief, Appellants argue that the Examiner's rejection of independent claim 39 under 35 U.S.C. § 102(e) is in error. Appellants argue that Johnson does not teach detecting movement of a device from a coverage area of a first network to the coverage area of a second network using an egress portal as claimed.

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[2] Throughout the opinion we refer to the Brief dated December 26, 2007, and the Reply Brief dated March 25, 2008.

Thus, Appellants' contentions directed to the rejection of claim 39 present us with the issue: have Appellants shown that the Examiner erred in finding that Johnson teaches detecting movement of a device from a coverage area of a first network to the coverage area of a second network using an egress portal as recited in claim 39?

PRINCIPLES OF LAW

Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. *RCA Corp. v. Appl. Dig. Data Sys., Inc.*, 730 F.2d 1440, 1444 (Fed. Cir. 1984); *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554 (Fed. Cir. 1983).

FINDINGS OF FACT

1. Johnson teaches a private cellular telecommunications system which supports the handoff of calls to a public system as a user moves from an area covered by the private system to an area covered by the public system. Abstract.
2. In Johnson's system, a call between two mobile devices located within the cells of a private network is carried by cells of a private network which are connected by a LAN. Para 0017.
3. When it is sensed that a mobile device enters a gateway cell and may exit the private network, a handover agent (HA) sets up a phantom call on a private network between the two mobile units. The base stations of the private network which are in communication with the

mobile units are then instructed to route the connection between the two base stations through the public network, (i.e. communication between the mobile devices changes from: a) first mobile device to first base station to LAN to second base station to second mobile device (Figure 2, stage 1); to b) first mobile device to first base station to public network's mobile switching center, to second base station to second mobile device (Figure 2, stage 3)). Para 0019.

4. After the phantom call has been established "conventional handout takes place between the gateway cell G and the public network if the mobile [terminal] leaves the building." Thus, the mobile device which is leaving the gateway cell to the public network is registered with the public network. Para 0019.
5. Johnson states that: "The [public] network knows to page MS2 [mobile station 2] here [the private network], since the private network will have informed the public network of this at the initial registration procedure, when MS2 was first switched on in the private network." From this sentence, and the ensuing sentences, it is apparent that when the mobile device is in the private network it is not registered with the public network as the public network is informed to route calls to the mobile station (which are placed on the public network) through the private network to the mobile unit. Para 0019.

ANALYSIS

Claims 1 through 5, 9 through 11, 25 through 29, 33, 34, and 40.

Appellants have persuaded us that the Examiner erred in finding that Johnson teaches an egress portal as recited in independent claims 1 and 25. Claim 1 recites "detecting a first signal from an egress portal, the first signal associated with indicating passage through the egress portal, wherein the egress portal resides within a cell of a wireless local area network and occupies a region that is smaller than the cell." Independent claim 25 recites similar limitations. Thus, the claims recite that the signal is indicative of passing through the portal and that the portal is smaller than a cell.

The Examiner's rejection appears to equate Johnson's gateway cell and the base station which serves the cell with the claimed egress portal. Answer 4. In response to Appellants' arguments, the Examiner clarifies that in rejecting independent claims 1 and 25: "[t]he examiner interpreted the base station as the egress portal since the base station provides a radio frequency access point" (Answer 17) and that the base station is smaller than the cell. We concur with the Examiner's finding that the base station provides a radio frequency access point and is smaller than a cell. Facts 3 and 4. Nonetheless, as argued by Appellants on page 4 of the Reply Brief, the base station cannot meet the claimed access portal as the signal from the base station is not associated with passing through the base station. The Examiner has not shown, nor do we find any disclosure of anything passing through the base station let alone producing a signal indicating passage through the base station. Accordingly, we will not sustain the Examiner's rejection of independent claims 1 and 25. Claims 2 through 5, 9 through 11,

26 through 29, 33, 34, and 40 are dependent upon claims 1 and 25, therefore, we similarly will not sustain the Examiner's rejection of these claims.

Claims 12, 14, 15, and 41.

Appellants have not persuaded us that the Examiner erred in finding that Johnson teaches a registration sequence that is initiated in response to a signal from an egress portal as recited in representative claim 12. Appellants argue that Johnson teaches that "the mobile units are registered with the public network when they are first powered on in the private network." Brief 12. Thus, Appellants conclude that the process assumes the mobile units will always exist in the private network which may not be the case. As such Appellants assert that the present invention differs from Johnson because in the Appellants' invention registration with the public network is not initiated until there is an indication that the unit is to leave the network. Brief 12. In response to the Appellants' argument, the Examiner finds that "[s]ince the system switches from the public network to the private network, a signal must be detected from the egress portal/base station in order to follow the registration procedure." Answer 17. We concur with the Examiner's reasoning.

Independent claim 12 recites a first signal associated with passage through the egress portal, and "initiating, in response to detecting first signal from the electronic device, a registration sequence with a wireless communication system."

Initially, we note that while claim 12 is similar to claims 1 and 25 in that it recites that the signal is indicative of passage through the portal, claim 12 does not recite that the portal resides within a cell and occupies an area

smaller than the cell. Thus, unlike claims 1 and 25, Appellants' arguments have not identified a limitation which differentiates Johnson's gateway cell, from which calls are handed off between the private and public network, from Appellants' claimed portal. Johnson teaches that mobile devices in the private network are registered in the private network when they are turned on in the private network. The private network informs the public network that the mobile devices are present in the private network so that calls to the mobile device from the public network can be routed to the private network for connection to the mobile device. Fact 5. However, we do not find that Johnson teaches registering the mobile device with the public network until the handout procedure when the mobile unit is moving from the gateway cell to the public network. Fact 4. As such, Appellants' arguments have not persuaded us of error in the Examiner's rejection of independent claim 12. Claims 14, 15, and 41 depend upon claim 12 and Appellants' arguments have grouped these claims with claim 12. Accordingly, we similarly sustain the Examiner's rejection of claims 12, 14, 15, and 41.

Claim 39.

Appellants have persuaded us that the Examiner erred in finding that Johnson teaches detecting movement of a device from a coverage area of a first network to the coverage area of a second network using an egress portal as recited in claim 39. Appellants argue that Johnson teaches using a handover agent which relies on changes in signal strength to detect movement of a mobile device from the coverage area of one network to a second network. Appellants argue that:

> The claimed invention is far more flexible because the egress portal, as a result of its ability to be strategically positioned near an exit, can

> facilitate the use of a triggering event to cause the mobile unit to begin searching for the first signal from the egress portal as part of its registration sequence. Johnson never mentions anything about placing the handover agent near an exit or entry point.

Brief 13.

These arguments have persuaded us of error in the Examiner's rejection. Claim 39 recites "detecting by the egress portal a movement of the mobile device from a coverage area of the first network to a coverage area of a second network." The Examiner's rejection appears to equate Johnson's gateway cell and the base station which serves the cell with the claimed egress portal. Answer 10. Further, on page 18 of the Answer, the Examiner finds that the handover agent and the gateway cell (located at the entrance to a building) work together to determine when a mobile device is leaving the building and moving from one network to another. While we concur with the Examiner's findings as to how Johnson detects movement from one network to another, we do not however concur with the Examiner that this teaching meets the claimed egress portal located at an entry/exit point. Johnson does not teach that the handover agent, which determines motion from one network to another, is located at an entry point to one of the networks. Accordingly, we will not sustain the Examiner's rejection of claim 39 .

Rejections under 35 U.S.C. § 103(a)

ISSUES

Claim 16.

Appellants argue on page 14 of the Brief that the Examiner's rejection of claim 16 is in error. Appellants argue that claim 16 depends upon claims 12, 14, and 15 and as such includes the claim 12 limitation of a registration sequence initiated in response to a signal from an egress.

Thus, Appellants arguments directed to the rejection of claim 16 present us with the same issue as discussed above with respect to claim 12.

Claims 18 through 24.

Appellants argue on pages 14 and 15 of the Brief and page 6 of the Reply Brief that the Examiner's rejection of claims 18 through 24 is in error. Appellants argue that Sundar and Chaskar do not teach an egress portal as claimed.

Thus, Appellants' contentions directed to the rejection of claims 18 through 24 present us with the issue: have Appellants shown that the Examiner erred in finding that Johnson teaches an egress portal as recited in independent claims 18, 20, and 23?

PRINCIPLES OF LAW

On the issue of obviousness, the Supreme Court has stated that "the obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 419 (2007). Further, the Court stated "[t]he combination of

familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR*, 550 U.S. at 416. "One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of the invention a known problem for which there was an obvious solution encompassed by the patent's claims." *Id.* at 419-420

FINDINGS OF FACT

6. Sundar teaches a system where mobile devices can be handed off between wireless local area networks (WLAN) and wireless wide area networks (WWAN). Abstract.
7. Chaskar teaches a system that allows a mobile device to be handed off between networks of different technologies. Abstract.
8. In one Chaskar embodiment, one type of technology is used within buildings and another outside of the building. At the borders areas, e.g. near doors to and from the building, the access points which provide in building coverage have a "border bit" set to 1, which allows the mobile device to hand off to the outside network. This system prevents spurious handoffs. Chaskar, Figure 2, paragraphs 0044, 0045, and 0057

ANALYSIS

Claim 16.

Appellants' arguments have not persuaded us that the Examiner erred in rejecting claim 16. Appellants arguments directed to dependent claim 16 assert that Johnson does not teach the registration sequence as recited in independent claim 12 (which claim 16 ultimately depends upon). As

discussed *supra* with respect to claim 12, Appellants' arguments have not persuaded us that the Examiner erred in finding that Johnson does not teach the registration sequence recited in claim 12. Accordingly, we sustain the Examiner's rejection of claim 16 for the reasons discussed with respect to claim 12.

Claims 18 through 24.

Appellants' arguments have persuaded us that the Examiner erred in rejecting claims 18 through 24. Independent claims 18, 20, and 23 are similar to independent claim 1, discussed *supra*, in that they recite limitations directed to an indication of passage through the egress portal and that the egress portal resides within a cell of a wireless local area network.

The Examiner has found that Sundar, in Figures 8 and 15, teaches detecting a signal indicating passage through the egress portal. Answer 12. Further, the Examiner finds that Chaskar, in Figure 2, teaches that the egress portal resides within a cell of a wireless local area network which occupies a region smaller than the cell. Answer 12. We note that from these findings it is unclear what elements of Sundar and Chaskar the Examiner finds to meet the claimed egress portal. On page 18 of the Answer, the Examiner clarifies the rejection and finds that the wireless access point (AP) of Chaskar meets the claimed access portal as it occupies a region smaller than the cell. We disagree with the Examiner's finding that the combination of Sundar and Chaskar teaches the claimed egress portal. Sundar and Chaskar both teach systems to hand off communication for a mobile device from one network to another. Facts 7 and 8. Chaskar teaches that there are border cells, created by access points, which transmit a border bit to indicate to the device that it

will be leaving one network and entering another network. Fact 9. While we concur that the access point, which creates the border cell is smaller than the cell, we do not find that Chaskar teaches or makes obvious a signal associated with passing through the access point. Rather, the signal in Chaskar, the border bit, is associated with passing through the border cell[3] created by the access point. Accordingly, we will not sustain the Examiner's rejection of independent claims 18, 20, and 23. Claims 19, 21, 22, and 24 depend upon one of claims 18, 20, and 23; accordingly, we similarly will not sustain the rejection of claims 19, 21, 22, and 24.

CONCLUSION

Appellants have not persuaded us of error in the Examiner's rejections of claims 12, 14, 15, and 41 under 35 U.S.C. § 102(e) or the Examiner's rejection of claim 16 under 35 U.S.C. § 103(a). However, Appellants' arguments have persuaded us of error in the Examiner's rejections of claim 1 through 5, 9 through 11, 25 through 29, 33, 34, 39, and 40 under 35 U.S.C. § 102(e), and of claims 18 through 24 under 35 U.S.C. § 103(a).

ORDER

The decision of the Examiner to reject claims 1 through 5, 9 through 12, 14 through 16, 18 through 29, 33, 34, and 39 through 41 is affirmed-in-part.

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[3] The Examiner has not asserted, nor do we find, that the evidence supports that the cell created by the access point occupies a region smaller than the cell as claimed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

ELD

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